

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Control unit for Radio Control Flight System model: 11151AC operating at 2.4GHz band. It is powered by 4 x 1.5V AA size batteries. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: 1.0dBm (tolerance: +/- 3dB).

The normal conducted output power is 1.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 95.9dB μ V/m at 3m in the frequencies 2452MHz and 2474MHz

The EIRP = $[(FS^*D)^2 / 30]$ mW = 0.7dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 93.6dB μ V/m at 3m in the frequency 2430MHz

The EIRP = $[(FS^*D)^2 / 30]$ mW = -1.6dBm
which is within the production variation.

The maximum conducted output power specified is 4.0dBm = 2.5mW

The source- based time-averaging conducted output power
= 2.5 * Duty cycle mW = 0.7 mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.474) mW
= 9.55 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

Transmitter Duty Cycle Calculation

The duration of one cycle = 12.16ms

Effective period of the cycle = $0.24\text{ms} \times 15 = 3.60\text{ms}$

DC = $3.60\text{ms} / 12.16\text{ms} = 0.296$ or 29.60%

This requirement is according to KDB 865664 D02